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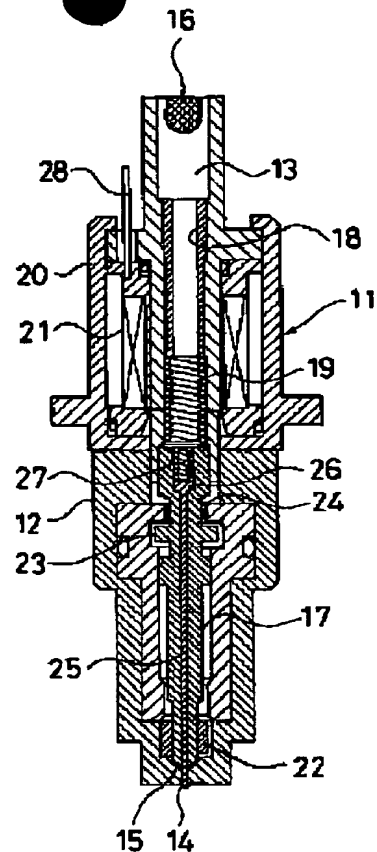
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TITLE : FUEL INJECTION VALVE



ABSTRACT : PROBLEM TO BE SOLVED: To suppress generation of deposit by operating and controlling a second needle valve for eliminating residual fuel in an injection hole arranged apart from the injection hole when fuel is injected, and a needle valve for opening the injection hole by abutting or separating on/from a sheet surface arranged on an inner opening edge of the injection hole at timing which is different from each other.

SOLUTION: A spring constant of a spring 27 for energizing a second needle valve 25 in an advancing direction is set smaller than that of a first spring 19 for energizing a first needle valve 17 in a closing direction, and the second needle valve 25 is operated prior to the first needle valve 17 when electromagnetic force is acted on a solenoid 21. In a fuel injection valve 11, when voltage applied on the solenoid 21 is set to 0 after fuel is injected, the first needle valve 17 is closing-operated, the second needle valve 25 is advanced into the injection hole 14, and residual fuel in the injection hole 14 is scraped down in the combustion chamber, and the residual fuel is eliminated. It is thus possible to prevent time lapsed change of a fuel spray characteristic by avoiding sticking of deposit caused by that residual fuel in the injection hole 14 is carbonized.

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